

BW Derby Car Technical and Safety Specifications

All cars will be inspected for the minimum requirements and safety elements the evening before the race. This will include safety equipment, such as seat belt and helmet and the verification of the overall dimensions, correct-sized wheels and the secure attachment of all the parts of the vehicle. A critical safety item for the drivers and spectators is item number eight. No car will be allowed to race if this spec is not met.

1. Wheelbase. Axle to Axle length. 48"
2. Width. 34" maximum. Overall width from outside wheel hub to wheel hub.
3. Overall length of car may not exceed 52 inches. Measured from end to end of frame, not tires.
4. The distance from ground to the bottom of the car frame in front of the rear axles must be at least 3" to clear the ramp release bar.
5. Weight. Cars must not weight more than 40 lbs.
6. A reasonable seatbelt must be installed and able to fit snugly on the driver. Search eBay and Amazon for "lap belts" 3/8 bolt minimum must be used to secure the belt.
7. Wheels must not exceed 10 inches in diameter. Wheels with bearings are allowed.
 - a. <https://cubscoutwheelsandtires.com> is a good resource.
8. Two 2x4 blocks fastened to the steering cross beam are required. The blocks must be no more than 1/8-inch from the centerboard. This makes the car easier to control.
9. Car frame must be made from lumber and not metal or plastics.
10. Axles must be at least 3/8" in diameter.
11. Minimum of 1/4-inch bolts to hold frame together. Screws are an OK second choice if the construction is stable. Nails are not approved.
12. All cars must have a seat with braced backrest.
13. Steering rope should be nylon and at least 1/4" diameter.
14. If threaded axles are used, the nuts must be secured with cotter pins, wire, or a secure locking nut.
15. Cars must be equipped with a handbrake and a rubber piece to contact the pavement. Brakes must be mounted by a 3/8" bolt or larger. Old bike tires work great for rubber foot.
16. No objects can be attached to the car that could possibly harm the driver or pedestrians.
17. Cars are encouraged to have a floorboard extending from the seat close to the front axle to discourage the use of feet for stopping the car.

Driver Safety Requirements

1. Helmet required.
2. Close toed shoes must be worn.
3. Long pants are encouraged.

Car Show Awards

- a. **Craftsmanship** – Is it clean, sanded, rounded corners and limited sharp edges. Quality of paint.
- b. **Style** – Paint style, added items (flags, banners, personal touches)
- c. **Originality** – Meets all specifications but car has been improved on with individual ideas.